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- 1 1. (Currently Amended) A method of generating contour lines from ~~row and~~
2 ~~column~~ elevation data, the method comprising the steps of:
- 3 a) selecting a first data point from the ~~row and column~~ elevation data
4 ~~comprising a first state;~~
- 5 b) setting the row and column data to an initial contour value, the row and
6 column data comprising a first state;
- 7 **~~b) c)~~** comparing a second data point with the first state for determining an
8 existence of a contour line depending on a result from the step of comparing;
- 9 c) ~~determining an existence of a contour line;~~
- 10 d) updating the first state to a next state, wherein the next state comprises
11 a next row and column data, if the contour line exists;
- 12 e) creating a portion of a contour line image, if the contour
13 line exists;
- 14 f) proceeding to a next data point; and
- 15 g) repeating steps b) through ~~g) f)~~ for a next column or row.
- 1 2. (Original) The method of claim 1 wherein the step of proceeding
2 comprises proceeding in a predetermined direction.
- 1 3. (Original) The invention of claim 2 wherein the step of proceeding
2 in a predetermined direction comprises proceeding in predetermined row and column
3 directions.
- 1 4. (Original) The method of claim 1 further comprising the step of
2 selecting a contour line interval.
- 1 5. (Original) The method of claim 1 further comprising anti-aliasing
2 the contour line image.

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1 6. (Original) The method of claim 1 wherein the step of updating
2 comprises determining if an elevation point row and column data exceeds a current row or
3 column base elevation by a value greater than a contour interval.

1 7. (Currently Amended) The method of claim 1 wherein the step of
2 updating comprises storing the next state in a memory.

1 8. (Original) The method of claim 7 wherein the step of storing
2 comprises storing the row and column base elevation.

1 9. (Original) The method of claim 1 wherein the step of creating
2 comprises drawing the portion of the contour line image.

1 10. (Original) The method of claim 9 wherein the step of drawing
2 comprises displaying the portion of the contour line image.

1 11. (Original) The method of claim 1 wherein the state of creating and
2 the step of repeating comprises creating an entire contour line image.

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1 12. (Original) A method of transforming input elevation data into a
2 real-time contour plot image, the method comprising the steps of:
3 a) selecting an ordering sequence;
4 b) selecting a contour line interval;
5 c) determining initial row and column base elevation values;
6 d) selecting a first data point;
7 e) determining whether a contour line point has been detected by
8 comparing the row base elevation value or column base elevation value plus the contour
9 interval to the elevation data;
10 f) drawing a portion of a contour plot image;
11 g) updating the row and column elevation values to a highest contour
12 interval multiple less than a elevation data point;
13 h) moving to a next data point; and
14 i) repeating steps e) through h).

1 13. (Original) The method of claim 12 wherein the step of determining
2 initial row and column base elevation values comprises selecting a contour elevation closest
3 to but not exceeding the first elevation value in the row.

1 14. (Original) The method of claim 12 wherein the step of drawing
2 and the step of repeating comprises drawing an entire contour line image.

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2 15. (Currently Amended) An apparatus for generating contour lines from
3 row and column data, the apparatus comprising:
4 a first data point from the row and column data
5 comprising a first state;
6 a means for comparing a second data point with the first
7 state for determining an existence of a contour line depending on a result from the means for
8 comparing;
9 ~~a means for determining an existence of a contour line;~~
10 a means for updating the first state to a next state, if the
11 contour line exists;
12 a means for creating a portion of a contour line image, if the contour
13 line exists;
14 a next data point for comparing with the next state by the means for
15 comparing, the next state comprising a next row and column data; and
16 a means for drawing an entire contour line image from a plurality of
17 portions of contour line images created by the means for creating.

1 16. (Original) The apparatus of claim 15 wherein said means for
2 creating comprises a display.

1 17. (Original) The apparatus of claim 15 further comprising memory
2 for storing the next state.

1 18. (Original) The apparatus of claim 15 further comprising a means
2 for anti-aliasing the entire contour line image.